

**REMARKS/ARGUMENTS**

Claims 1-39 are pending in the subject patent application. Claims 32-39 have been withdrawn, in response to a restriction requirement. Claims 1- 39 are hereby canceled. New claims 40 – 52 have been added. Support for new claims 40 – 52 is found in the specification, claims, and drawings as originally filed, therefore, applicant respectfully submits that claims 40 – 52 do not add new matter.

***35 U.S.C. § 102(b) Rejections -- Chiang et al.***

On pages 3-4 of the August 19, 2005 Office Action, Claims 1-9, 11-13, 16-25 and 27-29 were rejected for allegedly being anticipated by Chiang et al. (Chiang). Applicant respectfully submits that new claim 40 is not anticipated by Chiang.

New claim 40 include the following limitations.

“A multi-band antenna system, comprising:  
a reactive circuit having a loop section and a shunt capacitor, the loop section having a ground conductor, forming a shunt inductor of the reactive circuit, and a signal conductor, the shunt capacitor having a first terminal coupled to the ground conductor at the first end of the loop section and a second terminal coupled to the ground conductor at the second end of the loop section;  
 a dipole antenna having a first pole and a second pole; and  
 a transmission means coupling the first pole to the ground conductor and coupling the second pole to the signal conductor.”

(New claim 40) (Emphasis added)

In contrast Chiang does not disclose a loop section, having a ground conductor that forms a shunt inductor of a reactive circuit.

Chiang discloses an antenna array having a plurality of antenna elements 22. Each antenna element 22 includes a substrate 140, upon which a conductive planar element 142 is printed on one side 144 in an upper region of the substrate 140. A

conductive planar ground patch 146 is printed on the opposite side 148 in a lower region of the substrate 140. A feed strip 150 extends from the bottom of the conductive planar element and connects to a transmission line 152 at the bottom feed point 153 located at the bottom edge 155 of the substrate 140. The feed strip 150 includes an upward extension 151 having notches 154. The conductive planar element 142 and the transmission line 152 are electrically isolated from a ground plane 20. The transmission line 152 is connected to a delay line 58, which in turn is connected to a lumped or variable impedance element 57 and a switch 59.

Chiang fails to disclose a loop section as claimed in new claim 40. Moreover Chiang does not disclose a “multi-band antenna system”. Chiang teaches that alternative antenna designs for different applications having different frequency bands can be made, but fails to disclose a single antenna structure that is a *multi-band* antenna system.

For these reasons, applicant respectfully submits that claim 40 is not anticipated by Chiang. Given that claims 41 – 52 depend, directly or indirectly from claim 40, applicant respectfully submits that claims 41 – 52, are, likewise, not anticipated by Chiang.

### ***35 U.S.C. § 102(b) Rejections -- Judd***

On pages 4-5 of the Office Action, Claims 1-9, 11-13, 16-25 and 27-29 were rejected for allegedly being anticipated by Judd et al. (Judd). Applicant respectfully submits that new claim 40 is not anticipated by Judd.

As discussed above, new claim 40 includes the limitations of “a reactive circuit having a loop section and a shunt capacitor, the loop section having a ground conductor, forming a shunt inductor of the reactive circuit.”

In contrast Judd does not disclose a loop section, having a ground conductor that forms a shunt inductor of a reactive circuit.

Judd discloses an L-shaped indoor antenna system having a first pair of opposed planar support surfaces and a second support member having a second pair of opposed planar support surfaces. The first and second support members are coupled along a common edge and oriented such that the first pair of planar support surfaces is substantially orthogonal to the second pair of planar support surfaces. A plurality of antennas is mounted to each of the support surfaces of the first and second pairs of supports surfaces. According to Judd, such an antenna system provides omni-directional coverage, thereby avoiding the need to point or orient the antenna to achieve optimal reception. The “L-shape” of the antenna system also allows the antenna system to be installed in a corner of a room.

Judd fails to disclose a loop section as claimed in new claim 40. Moreover, in regard to claim 47, Judd does not disclose a radiation impedance of the monopole antenna that is input to a diplexer and transmitted to a radio signal receiver of a wireless modem. The “modem 96” described in column 3, lines 58-64 of Judd cannot be properly characterized as corresponding to the “a wireless modem” as claimed. A wireless modem is a network interface apparatus that allows a computing device (e.g. a laptop computer or other device) to gain wireless access to a wireless communications network (e.g. the PCS or CDMA communications networks). The “modem 96” in Judd does not function in such a manner, and there is no teaching or suggestion that the “modem 96” may be employed as a network interface apparatus to gain access to a wireless communications network. The “modem 96” in Judd only operates to select which “antenna face” (26a and

28a of FIG. 4 or 26b or 28b of FIG. 5) of an L-shaped indoor antenna system has the maximum RF power. It does not assist a computing device gain access to a wireless communications network.

For these reasons, applicant respectfully submits that claim 40 is not anticipated by Judd. Given that claims 41 – 52 depend, directly or indirectly from claim 40, applicant respectfully submits that claims 41 – 52, are, likewise, not anticipated by Judd.


CONCLUSION

For at least the foregoing reasons, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner has any further questions or comments concerning the amendments made herein, he is encouraged to telephone the undersigned at 408-282-1857.

Respectfully submitted,

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Thomas Van Zandt  
Reg. No. 43,219

THELEN REID & PRIEST LLP  
P.O. Box 640640  
San Jose, CA 95164-0640  
(408) 282-1857 Telephone  
(408) 287-8040 Facsimile